

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A-783
Revision 9
GULFSTREAM AMERICAN
G-73

April 1, 1981

AIRCRAFT SPECIFICATION NO. A-783

Type Certificate Holder

Frakes Aviation
Claburne Airport
Route 3, Box 229-B
Cleburne, Texas 76031

I. Model G-73, 12 PCAmM, Mallard, approved September 8, 1947

Engines 2 P & W Wasps S3H1 or Military R-1340-36, -47, -49, -51 or -AN-1
(See also Item 109 for optional engines.)

Fuel 91 min. octane aviation gasoline

Engine limits

	<u>HP</u>	<u>RPM</u>	<u>MP</u> <u>In.Hg.</u>	<u>ALT</u>
Takeoff (1 minute)	600	2,250	36.0	-
Max. continuous	550	2,200	34.0	S.L.
	550	2,200	32.5	5,000'

(Straight line manifold pressure variation with altitude shown)

Airspeed limits (CAS)

Level flight or climb	220 mph (191 knots)
Glide or dive	270 mph (235 knots)
Flaps extended	125 mph (109 knots)

C.G. range

(-17.3) to (-7.4). Moment change due to retraction of landing gear
(nose and main) is +1,032 in. lb.

Datum

Rear face of main wing beam (Sta. 233.65).

Leveling means

Fore and aft leveling lugs located in left or right wheel pocket.

Maximum weight

12,750 lbs.

No. seats

Two cockpit (-108.65); 10 cabin. (See Approved Airplane Flight Manual
for arrangement.)

Maximum baggage

Forward compartment 460 lb. (Sta. 53 to 93, max. floor loading 50 lb./sq. ft.).
Aft compartment 540 lbs. (Sta. 384 to 428, max. floor loading 75 lb./sq.ft.)

Fuel capacity

360 gal. (180 gal. in 7 cells in right and left wing at (-14) for airplane serial
nos. J-49 and up. Original fuel capacity for airplane serial nos. J-1 through
J-4 and J-9, J-10 and J-11 is 330 gal. consisting of 165 gal. in one integral
tank in each wing. Original fuel capacity for airplanes J-8, J-12 through J-48
is 380 gal. consisting of 190 gallons in one integral tank in each wing. J-1
through J-48 also eligible for bladder-type fuel cell installation in accordance
with Grumman data. See Notes 1B and 1C regarding "System Fuel and Oil."

Oil capacity

20 gal. (Two tanks, 10 gal. each in nacelles) (-16)

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Control surface movements	Wing flaps	Up	-	Down	45°
	Elevator trim tab	Up	70°	Down	25°
	Elevator	Up	30°	Down	10°
	Aileron	Up	21°	Down	18°
	Rudder trim tab	Right	20°	Left	20°
	Rudder	Right	25°	Left	25°
Serial nos. eligible	J-1 and up				
Required equipment	Items 1, 102, 103, 104(a) or (b), 201, 202, 302 and 401. Item 302, battery required since electrical power is required for auxiliary electric fuel pumps.				

Specifications Pertinent to All Models

Certification basis	Type Certificate No. 783 (Transport Category, CAR 4a).
Production basis	None
Equipment	A plus (+) or minus (-) sign preceding the weight of an item indicates net weight change when that item is installed.

Propellers and Propeller Accessories, except De-Icing Equipment

1. Two Hamilton Standard propellers, hubs 23 D40-51, blades 6533A-18 or 6533A-18S. Diameter: 8'6-5/16" max., 8'4-5/16" min. allowable for repairs. For interchangeable blade models see Propeller spec. no. 719 (Note 6). Low pitch setting 12° at 42 in. sta. Provision is made in the propeller hub for a positive high pitch stop in order to meet flight performance requirements. This is indicated by the dash number (-51) on the propeller hub. 252 lb. each (-79)
2. Hamilton Standard Propeller Governor 4K11. 6 lb. each (071)

Engine and Engine Accessories - Fuel and Oil System

101. Two starters, Eclipse Type 1416-15 27 lb. each (-42)
102. Two oil coolers, Clifford Mfg. Co. 10" Diamond X 18 lb. each (-49)
9 in. Long No. B-36690 with UAP 4 port valve UD-4785.
103. System fuel and oil (see Note 1A for definition).
 - (a) Unusable fuel and oil is 15 lb./engine and 42 lb./engine respectively. 114 lb. (-39)
 - (b) On J-8 and J-12 through J-26 unusable fuel and oil/engine is 27 lb. and 42 lb. respectively. 138 lb. (-39)
 - (c) On J-27 and subsequent usable fuel and oil/engine is 9 lb. and 42 lb. respectively. 102 lb. (-39)
104. Fuel pumps
 - (a) Pesco 2E-207, electric-driven fuel booster pump (Serial Nos. J-1, J-2, and J-3) 6 lb. each (-29)
 - (b) Thompson Product TFD-10300, electric-driven fuel booster pump (Serial No. J-4 and up) 7 lb. each (-29)
105. Surface combustion heater ADS-100N-041G 90 lb. each (+206)
106. Integral auxiliary fuel tanks (50 gal. each) in wing tip float, including pump and line 19 lb. each (+10)
107. Two vacuum pumps, Type B-2B or Aero Model A505-DD, for de-icer installation only. 4 lb. each (-49)
108. Oil dilution system. 3 lb. (-39)
109. Engine - Pratt and Whitney WASP S1H1 Use actual weight increase

<u>LIMITS</u>	<u>HP</u>	<u>RPM</u>	<u>HP In.Hg.</u>	<u>ALT</u>
Takeoff (1 minute)	600	2,250	36.5	-
Maximum continuous	550	2,200	35.0	S.L.
	550	2,200	33.0	8,000'

(Straight line MP variation with altitude)

In order to provide adequate engine cooling, when P & W S1H1 engine is installed, cowling and intercyylinder duct must be modified per Grumman Drawings 108335B, 108344, 109050B, and 109051C. Flight Manual revised pages 1, 2, 5, 6, 9, 11, 26, 30, and 35, approved May 18, 1950, required.

Landing Gear and Floats

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|------|--|--------------------|
| 201. | Two 9.50-16 main wheels, Goodyear L 9.50-16HBA, with brakes and 9.50-16 6-ply nylon tires | 120 lb. each (+4) |
| 202. | 19x6.89-10 nose wheel, Bendix Type B-1, Assembly No. 145308A and 19x6.80-10 6-ply rayon tire (tire to be placarded for 80 psi inflation pressure). | 37 lb. each (-174) |

Electric Equipment

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|------|--|-------------------|
| 301. | Two generators, Eclipse Type 1273-3, installed on J-1, J-2, and J-3.
Leece & Neville 2471-G12, installed on J-4 through J-9
Leece & Neville 2473-G12, installed on J-10 and subsequent | 32 lb. each (-58) |
| 302. | Battery, Exide 12-TS-9L | 73 lb. (-4) |
| 303. | Two landing lights, Grimes G-3801-1 or G-3801-3 | 7 lb. each ((+18) |

Interior Equipment

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|------|---|--------------------|
| 401. | CAA Approved Airplane Flight Manual revised June 30, 1947.
(The manual may be carried as part of or bound with the operator's "Approved Operations Manual" but must remain in the airplane and must retain its identity as an individual manual. | |
| 402. | Two 3- minute parachute flares, International | 23 lb. each (+221) |
| 403. | Two windshield wipers, Kearfoot Type | 2 lb. each (-134) |
| 404. | Safety belt and harness assembly, NAF 1201-1 (cockpit) | |
| 405. | Sperry Model A-12 automatic pilot installation | 194 lb. (-144) |
| 406. | Lear L-2C automatic pilot
To be installed in accordance with Lear Drawing No. 95600.
The following placards to be installed:
(1) On autopilot master switch, "AUTOPILOT MASTER SWITCH ON,"
(2) On quick disconnect switch, "AUTOPILOT DISCONNECT ON-OFF,"
(3) In plain view of the pilot, "DO NOT USE AUTOPILOT BELOW 450 FEET ABOVE TERRAIN IN CRUISE CONFIGURATION," "DO OT USE AUTOPILOT BELOW 300 FEET ABOVE TERRAIN IN APPROACH CONFIGURATION." Servo slipclutch settings measured on the ground: rudder 175 lb., aileron 50" lb., elevator 75" lb. (Approach coupler not investigated; therefore, not eligible.)
Airplane Flight Manual Supplement dated January 14, 1952, is required equipment. | 62 lb. (- 7) |

De-Icing Equipment (Propellers, Wing and Windshield)

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|------|--|--------------------|
| 501. | Surface de-icers, Goodrich Type II, Model 705 | |
| | (a) Two wing boots (removable) | 24 lb. each (-23) |
| | (b) Stabilizer boot (removable) | 8 lb. each (+272) |
| | (c) Fin boot (removable) | 7 lb. (+300) |
| | (d) De-icer installation general equipment (fixed portion) | |
| | (1) Mechanically cycled installation | 60 lb. (+17) |
| | (2) Electronically cycled installation | 74 lb. (+37) |
| 502. | Propeller anti-icer | |
| | (a) Propeller lines and Hamilton Standard slinger rings | 4 lb. (- 79) |
| | (b) 7.5 gal. alcohol tank, pump and accessories (fluid weight 50 lb.) | 62 lb. (+ 7) |
| 503. | Windshield anti-icer
(Utilizes fluid from propeller anti-icer tank) | 2 lb. (- 19) |

Miscellaneous (not listed above)

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| 601. | Installation of revised wing leading edge in accordance with Grumman Drawing No. 106930. (Not eligible with Item 501 installed.) | 30 lb. (- 19) |
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NOTE 1. A. Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions when necessary, must be in each aircraft at the time of original certification and at all times thereafter (except in the case of air carrier operators having an approved weight control system).

- B. "System Fuel and Oil" is that amount required to fill both systems and the tanks up to the tank outlets to the engines, when the airplane is in the level attitude. "System Fuel and Oil" and all hydraulic fluid must be included in the certificated weight empty.
- C. Fuel and oil tank capacities do not include any "System Fuel and Oil."

NOTE 2. The following placard shall be placed in the instrument panel in full view of the pilot.

"THIS AIRPLANE SHALL BE OPERATED IN ACCORDANCE WITH SECTION 1
'OPERATING LIMITATIONS' OF FLIGHT MANUAL WHICH SHALL BE CARRIED
IN THE PILOT'S COMPARTMENT AT ALL TIMES."

.....END.....